

IN THE CLAIMS:

Please cancel claims 1-7 without prejudice.

Please enter the following new claims 8 – 14.

1. A high voltage transformer having a plurality of elements for voltage transformers, said elements comprising:

a high voltage transforming means (1, 1'),

a rectifier (2, 2'),

a filter (3, 3'),

a resistive divider (4, 4'),

a high voltage switch (5, 5'),

a magnetic core (7, 7'),

a low voltage input (10),

wherein each rectifier, filter, resistive divider, high voltage switch, magnetic core, has a first end and a second end,

each first end being connected to zero voltage level;

each second end being opposite to each first end;

said rectifiers, filters, resistive dividers, high voltage switches, magnetic cores, are arranged in two differentiated groups,

a first group comprising positive voltage elements and

a second group comprising negative voltage elements;

the positive voltage elements are separated from the negative voltage elements by solid insulating means in two insulated chambers;

voltage towards the second end in each of said elements:

progressively increases in the positive voltage elements and;

progressively decreases in the negative voltage elements;

so that, at an equal distance from zero voltage level, the elements of each group have equipotential voltages.

2A. A high voltage transformer according to claim 8, wherein the progressive increase of voltage in the positive voltage elements and the progressive decrease of voltage in the negative voltage elements are both linear.

3 10. A high voltage transformer according to claim 8, wherein the zero voltage level is located in an area where signals of the low voltage input are located.

4 11. A high voltage transformer according to claim 10, wherein the zero voltage level is located at an upper side of the transformer.

5 12. A high voltage transformer according to any of claims 8-10 or 11, wherein maximum level of potential is defined at lower ends of the high voltage switches.

6 13. A high voltage transformer according to claim 8, wherein the two groups are separated by a single solid insulating means.

7 14. A high voltage transformer according to claim 8, further comprising means for minimizing stray capacitances between the first group elements and the second group elements, by arranging said groups so that only a very small surface of the first group is opposed to the second group.